

CULTURAL RESOURCES SURVEY OF THE RIVER OAKS 115kV TRANSMISSION LINE, HORRY COUNTY, SOUTH CAROLINA

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Chicora Research Contribution 381

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ABSTRACT

This study reports on an intensive archaeological and cultural resources survey of a 5.6 mile transmission line in the eastern portion of Horry County, South Carolina. The work was conducted to assist Santee Cooper comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The corridor is to be used by Santee Cooper for the construction of the River Oak Transmission Line. The proposed corridor will start at an existing powerline easement and substation and will end on River Oaks Boulevard. The corridor runs approximately southeast, generally along the existing railroad tracks and dirt roads.

The proposed route will require the clearing of the corridor, followed by construction of the proposed transmission line. These activities have the potential to affect archaeological and historical sites and this survey was conducted to identify and assess archaeological and historical sites which may be in the project corridor. For this study an area of potential effect (APE) 0.5 mile around the proposed transmission line was assumed.

Consultation with the S.C. Department of Archives and History revealed no previously identified NRHP sites within the 0.5 mile APE. A comprehensive survey has been done for the county (Utterback 1988) with an updated list in 1990 by Preservation Consultants.

An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology identified five archaeological sites within the proposed APE. These include 38HR202-204, 38HR453, and 38HR454. Site 38HR202 is an Early Archaic to Late Woodland scatter; 38HR203 is an early to Middle Woodland and Mississippian scatter; 38HR204 is an Early to Late Woodland and nineteenth century scatter; 38HR453 is a nineteenth to twentieth century scatter; and 38HR454 is a Late Archaic scatter.

All sites were recommended not eligible for inclusion on the National Register.

The archaeological study of the corridor incorporated shovel testing at 100-foot intervals along the center line of the proposed 50-foot wide corridor, which had been surveyed at the time of this investigation. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. A total of 297 shovel tests were excavated in the survey tract. One archaeological site, 38HR473 was identified as a result of these investigations. This site consists of a very sparse scatter of Middle Woodland lithics and pottery. We recommend this site not eligible for inclusion on the National Register of Historic Places.

A survey of public roads within 0.5 mile of the proposed transmission line was conducted in an effort to identify any architectural sites over 50 years old which also retained their integrity. Due to rapid commercial development of this part of Horry County, no historic structures were found.

Finally, it is possible that archaeological remains may be encountered in the corridor during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

TABLE OF CONTENTS

List of Figures		iv
Introduction		1
Natural Environment		5
<i>Physiography</i>	5	
<i>Geology and Soils</i>	5	
<i>Floristics</i>	7	
<i>Climate</i>	7	
Prehistoric and Historic Background		9
<i>Previous Research</i>	9	
<i>Prehistoric Overview</i>	9	
<i>Historic Synopsis</i>	12	
Research Methods		17
<i>Archaeological Field Methods</i>	17	
<i>Architectural Survey</i>	18	
<i>Site Evaluation</i>	18	
<i>Laboratory Analysis</i>	19	
Results of Survey		21
<i>Introduction</i>	21	
<i>Archaeological Resources</i>	21	
<i>Architectural Resources</i>	23	
Conclusions		25
Sources Cited		27

LIST OF FIGURES

Figure

1.	Project vicinity in Horry County	2
2.	Survey corridor and previously identified sites	3
3.	View of mixed pines and hardwoods	5
4.	View of Socastee Swamp	6
5.	Generalized cultural periods for South Carolina	10
6.	Portion of Mouzon's 1775 map showing the project vicinity	13
7.	Portion of Mills' <i>Atlas</i> 1825 map	14
8.	Portion of the 1918 soil map showing the survey corridor	15
9.	Portion of the 1937 <i>General Highway and Transportation Map</i>	16
10.	View of the railroad tracts	17
11.	View of South Prong Substation	18
12.	Portion of the corridor showing 38HR473	21
13.	Sketch map and soil profile for 38HR473	22
14.	View of 38HR473	23

INTRODUCTION

This investigation was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Ken Smoak of Sabine & Waters. The work was conducted to assist Santee Cooper comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project site consists of a corridor measuring about 5.6 miles, situated in the eastern portion of Horry County (Figure 1). The proposed route starts at an existing transmission line and substation and runs southeast, paralleling railroad tracks, an existing transmission line, and various dirt roads (Figure 2).

The corridor consists of generally level areas of land with elevations of around 40 feet AMSL except around Socastee Swamp which drops down to about 20 feet AMSL. Other parts of the corridor encountered mixed pines and hardwoods, planted pines, and various scrub vegetation. Although located just outside of Myrtle Beach in Horry County, the corridor still passes through some rural areas. The vicinity, however, is being quickly developed.

The corridor, as previously mentioned, is intended to be used as a transmission route. Landscape alteration, primarily clearing, grubbing, and grading, as well as subsequent construction of the towers and other facilities, will cause damage to the ground surface and any archaeological resources which may be present in the survey area.

Construction, operation, and maintenance of the transmission line may also have an impact on historic resources in the project area. Although the project will not remove any structures, powerline corridors (as well as other above grade projects) may detract from the visual integrity of historic properties, creating what many consider discordant surroundings. Because of the small size of the poles to be used (80 feet or less), this

impact is anticipated to be modest. Nevertheless, this architectural survey uses an area of potential effect (APE) about 0.5 mile radius around the proposed facility.

This study, however, does not consider any future secondary impact of the project, including increased or expanded commercial or industrial development of this portion of Horry County.

We were requested by Mr. Ken Smoak of Sabine & Waters to conduct a cultural resources survey for the proposed transmission line on March 11, 2003. This incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology. As a result of that work, five sites were found in the project area. These include 38HR202-204, 38HR453, and 38HR454. Site 38HR202 is an Early Archaic to Late Woodland scatter; 38HR203 is an early to Middle Woodland and Mississippian scatter; 38HR204 is an Early to Late Woodland and nineteenth century scatter; 38HR453 is a nineteenth to twentieth century scatter; and 38HR454 is a Late Archaic scatter. All sites were recommended not eligible for inclusion on the National Register.

In addition, the South Carolina Department of Archives and History GIS was consulted to check for any NRHP buildings, districts, structures, sites, or objects in the study area. No NRHP sites were found within a half-mile of the survey. There has been a comprehensive county-wide survey for Horry (see Utterback 1988), so it is unlikely that any such sites will be found.

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files.

The archaeological survey was conducted from April 3-4, 2003 by Mr. Tom Covington and



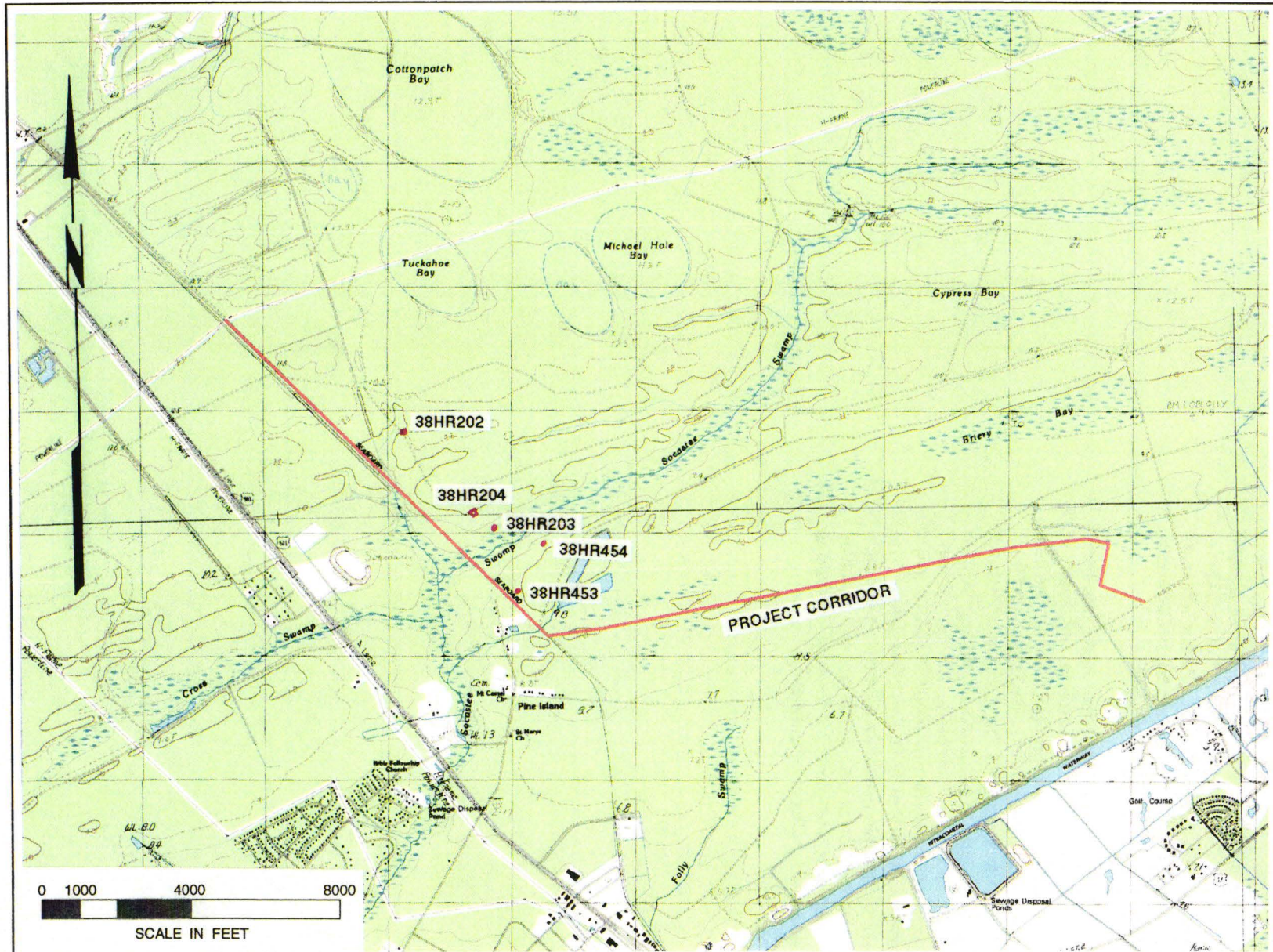


Figure 2. Survey corridor and previously identified sites (basemap is USGS Nixonville and Myrtle Beach 7.5').

Ms. Nicole Southerland. The architectural survey of the corridor, designed to review and validate the findings of the previous historic structures as well as to determine if there were additional historic sites in the APE, was conducted at the same time. Laboratory work and report production was conducted at Chicora's laboratories in Columbia, South Carolina from April 7-9, 2003.

One archaeological site form, has been filed with the South Carolina Institute of Archaeology and Anthropology (SCIAA). The field notes, artifact catalog, and artifacts resulting from these investigations will be curated at SCIAA using their accessioning and cataloging system once the project is complete. All records and duplicate copies will be provided to SCIAA and will be maintained by that institution in perpetuity. The only photographic materials associated with this project are color prints, which are not archival. The negatives and prints for these photographs are retained by Chicora Foundation.

NATURAL ENVIRONMENT

Physiography

The project area is situated in eastern Horry County, about 5 miles west of Myrtle Beach. The level topography in the region is interrupted by only occasional marsh sloughs and small wetland depressions. The dominating feature is the Waccamaw River to the west which meanders, forming large cutoffs or lakes, as well as much swamp.

In general, the topography of the study corridor slopes in toward Socastee Swamp, located in the center of the corridor. The Waccamaw essentially bisects the county into east and west halves and drains numerous swamps between the river and the Atlantic Ocean. On a regional scale the topography slopes either southeast toward the Waccamaw or northwest toward smaller drainages such as Maple Swamp.

Horry County is bounded to the north by Brunswick and Columbus counties, North Carolina, to the east by the Atlantic Ocean, to the south by Georgetown County, and to the west by Dillon and Marion counties. It lies within the Lower Coastal Plain which is made up of fluvial deposits that contain varying amounts of sand, silt, and clay (Dudley 1986). This is also the area known as the Atlantic Coast Flatwoods which extends from the sea shore inland about 30 to 70 miles. The area is characterized by broad flats and depressions. While there are areas of well drained

soils, much of the flatwoods consist primarily of poorly drained soils with clay subsoils, especially near the coast in the project area (Ellerbe 1974:18).

Elevations may range from sea level to about 100 feet above mean sea level in the Lower Coastal Plain. On the project corridor there are no areas where the land is higher than about 40 feet above mean sea level (AMSL), and some of the area is lower toward Socastee Swamp. A noticeable characteristic of this physiographic area is how gradually the flat lands seem to grade into either freshwater marshes, savannahs, or swamps.

Geology and Soils

The geology of the Lower Coastal Plain has been well described by Cooke (1936) who notes that from the Cape Fear River in North



Figure 3. View of mixed pines and hardwoods in the corridor.



Figure 4. View of Socastee Swamp through the corridor.

Carolina to Winyah Bay in South Carolina, the coast forms a "great arc scooped out by waves" (Cooke 1936:4). This area has been described by Brown (1975) as being an arcuate strand. In this area salt marshes are poorly developed or absent and few tidal inlets breach the coast (Smith 1933:20-21). The situation is the result of an erosional history about 100,000 years ago. In general, however, the geology of the Lower Coastal Plain is less complex than that of other sections of the state.

As previously mentioned, the area is dominated by fluvial deposits of unconsolidated sands and clays. Rocks are almost totally absent from the area, although Mills (1972[1826]:584) does note that some compact shell limestone was found on the Waccamaw between Gaul's Ferry and Bear Bluff.

Soils were primarily formed during the Pleistocene epoch and several terraces were deposited (Dudley 1986:85). The project vicinity is characterized by the Lynn Haven-Leon Association. This association, typical on nearly level areas and drainageways, are excessively

drained and poorly drained soils which tend to be sandy.

The survey corridor includes six soil series. Of the very poorly drained soils, Rutlege loamy sands are the most common. These soils have an A horizon of black (10YR2/1) loamy sand to 1.0 foot in depth over a dark gray (10YR4/1) sand to a depth of 1.7 feet.

Three poorly drained soil types are also found. Yorges fine sandy loams have an Ap horizon of very dark gray brown (10YR3/2) fine sandy loam to a depth of 0.7

foot over a dark gray brown (10YR4/2) fine sandy loam to a depth of 1.3 feet. The Leon Series has an A horizon of black (10YR2/1) fine sand to a depth of 0.4 foot over a light gray (10YR6/1) fine sand to a depth of 0.8 foot. Lynn Haven sands have an A horizon of black (10YR2/1) sand to a depth of 0.8 foot over a gray (10YR5/1) sand to a depth of 1.1 feet.

The remaining two soil are slightly better drained with Witherbee sands being somewhat poorly drained and having an A horizon of very dark gray (10YR3/1) sand to a depth of 0.4 foot over a yellowish brown (10YR5/4) sand to a depth of 1.3 feet. The Echaw sands are moderately well drained and have an A horizon of dark grayish brown (10YR4/2) sand to a depth of 0.3 foot over a light yellowish brown (10YR6/4) sand to a depth of 1.3 feet.

In 1826 Robert Mills commented that soil was rich and productive adjacent to Horry's rivers. Even the uplands were well suited for cotton with their light sandy soil underlaid by clay. But he commented that a great deal of swamp land was found in the district, "fit only for cattle ranges"

NATURAL ENVIRONMENT

(Mills 1972[1826]:585). Edmund Ruffin, who managed to visit much of South Carolina's coast in the mid-1840s, never sought to go to Horry, commenting that:

I would have gone to Horry, which is called the "dark corner" of the state, but for having no expectation of finding anyone acquainted with or feeling interested in the objects of explorations (Mathew 1992:215).

Floristics

Vegetation in Horry County is characterized in relation to the previously broad topographic patterns of poorly drained floodplains and lowlands, and the well drained uplands.

The vegetation in Horry County has been classified by K  chler (1964) as part of the Oak-Hickory-Pine forest, based on potential natural vegetation. This would consist of medium tall to tall forests of broadleaf deciduous and needleleaf ever-green trees. More specifically, however, the floodplains are covered by mixed hardwoods, including bald cypress, tupelo gum, and black gum. Less water tolerant trees, such as pines, occur on the uplands or on better drained slopes. Also found in the bottomlands, floodplains, and Carolina bays are red maple, ash, water oak, elm, and sweet gum. On the better drained uplands pine dominates, with loblolly and longleaf pines being indigenous and the slash pine introduced.

In 1826 Mills in describing the Horry District vegetation, noted:

The long leaf pine abounds, also the cypress, live oak, water oak, white oak, &c. The fruit trees are, peaches, apples, pears, plums, cherries, figs; besides strawberries, which grow wild, whortleberries, &c. The forest trees begin to bud in the latter part of March, and the fruit trees in April. The pine and cypress are mostly used for buildings (Mills 1972[1826]:582).

The poorly drained swamps and flatwoods of Horry County were not particularly attractive to early settlers and much of the area was not actively farmed for a number of years.

The vegetation along the corridor consists of mixed pines and hardwoods, planted pines, and swampland.

Climate

Elevation, latitude, and distance from the coast work together to affect the climate of South Carolina, although Horry is clearly dominated by its maritime location. Much of the weather is controlled by the proximity of the Gulf Stream, about 50 miles offshore. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state from west to east. Even the very cold air masses which cross the mountains are warmed by compression before the descent on the Coast.

As a result, the climate of Horry County is temperate. The winters are relatively mild with a mean temperature of 48  F and the summers are very warm and humid, with a mean temperature of 79  F and average humidity of 60%. Rainfall in the amount of about 51 inches is good for a broad range of crops. About 31 inches (or 60% of the total) occurs during the growing season, with until relatively recent periods of drought not being particularly common. Of course, there have been statewide droughts, such as the one in 1845, but more often the threat to Horry crops was flooding. Major floods have occurred in 1855, 1924, 1928, 1959, 1961, and 1973, with the September 1928 flood the largest known, reaching a stage of 12.75 feet above mean sea level (U.S. Army Corps of Engineers (1973:9).

The average growing season is about 234 days, although early freezes in the fall and late frosts in the spring can reduce this period by as much as 30 or more days (Dudley 1986:97). Consequently, most cotton planting, for example, did not take place until early May, avoiding the possibility that a late frost would damage the young seedlings.

PREHISTORIC AND HISTORIC BACKGROUND

Previous Research

Horry has received rather spotty archaeological attention. Derting and his colleagues, for example, list 67 reports associated with the county, with 41 of these (or 61%) representing highway or sewer surveys (Derting et al. 1991). Although dated, this indicates that attention has been focused on relatively narrow corridors, with only minor attention devoted to the area's rich prehistoric and protohistoric resources.

Considerable, primarily unpublished, research took place in the Myrtle Beach area during the 1960s at the Ellsworth Site by Erika Fogg-Amed, then a student of Reinhold Englemeyer at USC-Conway. Several test units were placed within the site which yielded Stallings, Thom's Creek, Hanover, and Cape Fear sherds, as well as a Morrow Mountain component (Fogg-Amed n.d. a). No site boundaries were established and, in fact, no site form has ever been filed.

Fogg-Amed also tested the "Coates Site," located about 10 miles north of Myrtle Beach on a high bluff overlooking a freshwater pond. Testing at this site yielded a dense shell midden that produced only lithic debitage (Fogg-Amed n.d. b). Again, no site form was filed.

Closer to the survey corridor at least three project areas have been surveyed. These are compliance reports and include a natural gas line (Sanders 2001) and two mine sites (Pecorelli 1999; Bridgman and Crumpton 2001).

Prehistoric Overview

The Paleoindian period, lasting from 12,000 to 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977; Williams 1968). The Paleoindian occupation,

while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna" (Michie 1977:124).

Unfortunately, little is known about Paleoindian subsistence strategies, settlement systems, or social organization. Generally, archaeologists agree that the Paleoindian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on the isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

The Archaic period, which dates from 8000 to 2000 B.C., does not form a sharp break with the Paleoindian period, but is a slow transition characterized by a modern climate an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited mammal. The chronology established by Coe (1964) for the North Carolina Piedmont may be applied with little modification to the South Carolina coastal plain and piedmont. Archaic period assemblages, characterized by corner-notched and broad stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

In the Coastal Plain of the South Carolina there is an increase in the quantity of Early Archaic remains, probably associated with an increase in population and associated increase in the intensity of occupation. While Hardaway and Dalton points are typically found as isolated

CULTURAL RESOURCES SURVEY OF THE RIVER OAKS 115kV TRANSMISSION LINE

			Regional Phases		
Dates	Period	Sub-Period	COASTAL	MIDDLE SAVANNAH VALLEY	CENTRAL CAROLINA PIEDMONT
1715	HIST.	EARLY	Altamaha		Caraway
1650	MISS.	LATE	Irene / Pee Dee Savannah	Rembert	Dan River
1100		EARLY		Hollywood	
	WOODLAND			Lawton	Pee Dee
		LATE	St. Catherines / Swift Creek	Savannah	
800		MIDDLE	Wilmington	Sand Tempered Wilmington?	Uwharrie
A.D.			Deptford	Deptford	Yadkin
B.C.					
300		EARLY	Refuge		Badin
1000	ARCHAIC	LATE	Thom's Creek Stallings		
2000			Savannah River Halifax		
3000		MIDDLE	Guilford Morrow Mountain Stanly		
5000	PALEOINDIAN	EARLY	Kirk		
8000			Palmer		
10,000			Hardaway		
			Hardaway - Dalton		
12,000			Cumberland	Clovis	Simpson

Figure 5. Generalized cultural sequence for South Carolina.

specimens along riverine environments, remains from the following Palmer phase are not only more common, but are also found in both riverine and interriverine settings. Kirks are likewise common in the coastal plain (Goodyear et al. 1979).

The two primary Middle Archaic phases found in the coastal plain are the Morrow Mountain and Guilford (the Stanly and Halifax complexes identified by Coe are rarely encountered). Our best information on the Middle

Woodland comes from sites investigated west of the Appalachian Mountains, such as the work in the Little Tennessee River Valley. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and South Carolina, where axes, choppers, and ground and polished stone tools are very rare.

The Late Archaic is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued the intensive exploitation of the uplands much like earlier Archaic groups. The bulk of our data for this period, however, comes from work in the Uwharrie region of North Carolina.

The Woodland period begins, by definition, with the introduction of fired clay pottery about 2000 B.C. along the South Carolina coast (the introduction of pottery, and hence the beginning of the Woodland period, occurs much later in the Piedmont of South Carolina). It should be noted that many researchers call the period from about 2500 to 1000 B.C. the Late Archaic because of a perceived continuation of the Archaic lifestyle in spite of the manufacture of pottery. Regardless of terminology, the period from 2500 to 1000 B.C. is well documented on the South Carolina coast and is characterized by Stallings (fiber-tempered) pottery. The subsistence economy during this early period was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish.

Like the Stallings settlement pattern, Thom's Creek sites are found in a variety of environmental zones and take on several forms. Thom's Creek sites are found throughout the South Carolina Coastal Zone, Coastal Plain, and up to the Fall Line. The sites are found into the North Carolina Coastal Plain, but do not appear to extend southward into Georgia.

In the Coastal Plain drainage of the Savannah River there is a change of settlement, and probably subsistence, away from the riverine focus found in the Stallings Phase (Hanson 1982:13; Stoltman 1974:235-236). Thom's Creek sites are more commonly found in the upland areas and lack evidence of intensive shellfish collection. In the Coastal Zone large, irregular shell middens; small, sparse shell middens; and large "shell rings" are found in the Thom's Creek settlement system.

The Deptford phase, which dates from 1100 B.C. to A.D. 600, is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. the Deptford

settlement pattern involves both coastal and inland sites.

Inland sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Coastal Plain, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980b). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98).

Throughout much of the Coastal Zone and Coastal Plain north of Charleston, a somewhat different cultural manifestation is observed, related to the "Northern Tradition" (e.g., Caldwell 1958). This recently identified assemblage has been termed Deep Creek and was first identified from northern North Carolina sites (Phelps 1983). The Deep Creek assemblage is characterized by pottery with medium to coarse sand inclusions and surface treatments of cord marking, fabric impressing, simple stamping, and net impressing. Much of this material has been previously designated as the Middle Woodland "Cape Fear" pottery originally typed by South (1976). The Deep Creek wares date from about 1000 B.C. to A.D. 1 in North Carolina, but may date later in South Carolina. The Deep Creek settlement and subsistence systems are poorly known, but appear to be very similar to those identified with the Deptford phase.

The Deep Creek assemblage strongly resembles Deptford both typologically and temporally. It appears this northern tradition of cord and fabric impressions was introduced and gradually accepted by indigenous South Carolina populations. During this time some groups continued making only the older carved paddle stamped pottery, while others mixed the two styles, and still others (and later all) made exclusively cord and fabric stamped wares.

The Middle Woodland in South Carolina is characterized by a pattern of settlement mobility and short-term occupation. On the southern coast it is associated with the Wilmington phase, while on the northern coast it is recognized by the presence of Hanover, McClellanville or Santee, and Mount Pleasant assemblages. The best data concerning Middle Woodland Coastal Zone assemblages comes from Phelps' (1983:32-33) work in North Carolina. Associated items include a small variety of the Roanoke Large Triangular points (Coe 1964:110-111), sandstone abraders, shell pendants, polished stone gorgets, celts, and woven marsh mats. Significantly, both primary inhumation and cremations are found.

On the Coastal Plain of South Carolina, researchers are finding evidence of a Middle Woodland Yadkin assemblage, best known from Coe's work at the Doerschuk site in North Carolina (Coe 1964:25-26). Yadkin pottery is characterized by a crushed quartz temper and cord marked, fabric impressed, and linear check stamped surface treatments. The Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least A.D. 300 coexisted with this Triangular Tradition. The Yadkin series in South Carolina was first observed by Ward (1978, 1983) from the White's Creek drainage in Marlboro County, South Carolina. Since then, a large Yadkin village has been identified by DePratter at the Dunlap site (38DA66) in Darlington County, South Carolina (Chester DePratter, personal communication 1985) and Blanton et al. (1986) and have excavated a small Yadkin site (389SU83) in Sumter County, South Carolina. Research at 38FL249 on the Roche Carolina tract in northern Florence County revealed an assemblage including Badin, Yadkin, and Wilmington wares (Trinkley et al. 1993:85-102). Anderson et al. (1982:299-302) offer additional typological assessments of the Yadkin wares in South Carolina.

Over the years the suggestion that Cape Fear might be replaced by such types as Deep Creek and Mount Pleasant has raised considerable controversy. Taylor, for example, rejects the use of the North Carolina types in favor of those developed by Anderson et al. (1982) from

their work at Mattassee Lake in Berkeley County (Taylor 1984:80). Cable (1991) is even less generous in his denouncement of ceramic constructs developed nearly a decade ago, also favoring adoption of the Mattassee Lake typology and chronology. This construct, recognizing five phases (Deptford I-III, McClellanville, and Santee I), uses a type variety system.

Regardless of terminology, these Middle Woodland Coastal Plain and Coastal Zone phases continue the Early Woodland Deptford pattern of mobility. While sites are found all along the coast and inland to the Fall Line, shell midden sites evidence sparse shell and artifacts. Gone are the abundant shell tools, worked bone items, and clay balls. Recent investigations at Coastal Zone sites such as 38BU747 and 38BU1214, however, have provided some evidence of worked bone and shell items at Deptford phase middens (see Trinkley 1990).

In many respects the South Carolina Late Woodland may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500 to 700 years (cf. Sassaman et al. 1990:14-15). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

The South Appalachian Mississippian period, from about A.D. 1100 to A.D. 1640, is the most elaborate level of culture attained by the native inhabitants and is followed by cultural disintegration brought about largely by European disease. The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers. The earliest phases include the Savannah and Pee Dee (A.D. 1200 to 1550).

Historic Synopsis

The earliest activity in the Horry County area may have been the Spanish Ayllon

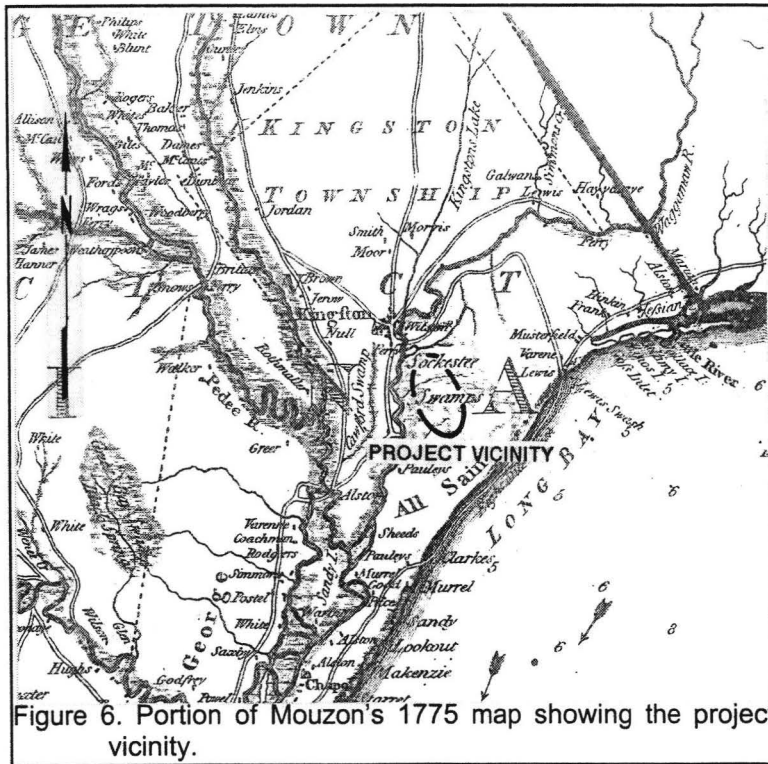


Figure 6. Portion of Mouzon's 1775 map showing the project vicinity.

movement from Rio Jordon (Cape Fear River) to San Miguel de Gualdape, 45 leagues distant. Some have argued that Fort San Miguel may have been at the mouth of Winyah Bay, although Paul Hoffman has recently suggested the fort was in Beaufort County, South Carolina or Chatham County, Georgia.

While the English settled Charleston in 1670, the northern frontier was ignored, except for the Indian trade, until 1731, when the first Royal Governor of Carolina, Robert Johnson, directed 11 townships to be laid out, including Kingston on the west bank of the Waccamaw. Kingston covered much of Georgetown and Horry counties and by 1734 the town of Kingston, later known as Conwayboro and eventually Conway, was founded. The township, however, was never erected into a parish, but remained part of the Parish of Prince George, Winyah until 1785. In that year Prince George was divided into four districts and by 1801 Horry District was formally separated from Georgetown (Rogers 1972:9). The designation of "county" was not used until 1868. A variety of townships were established, including Simpson Creek and Little River on the

south side of the Waccamaw River.

Mouzon's 1775 map of the region fails to reveal any substantial settlement in the survey area. The focus was toward the far more profitable rice lands to the south, on the Waccamaw Neck and the more interior areas were settled by small subsistence farmers (Figure 6).

Prior to the Revolution there were few residents in Kingston and it was not until the late eighteenth century that English, French, Scotch, and Irish settlers began coming into the area. Many settlers in the early nineteenth century came from North Carolina and the northern seaboard states.

In spite of Horry's coastal plain situation, the area developed along vastly different lines than its southern neighbors Georgetown and Charleston. Horry District was always isolated from the remainder of South Carolina and had much stronger connections with North Carolina (Rogers 1972:3). The major traffic artery was the Waccamaw River and this reliance on river transport did not change until the highway development of the 1930s. Subsistence farming was the main occupation in the early 1800s and the farms were small, specializing in peas, wheat, rice, cotton, and corn, most for home consumption (Rogers 1972:5). Mills notes that the population was,

mostly engaged in cultivating the soil. There are a few mechanics, such as blacksmiths, shoemakers, taylors [sic], halters, etc. (Mills 1972[1826]:583).

For Mills' *Atlas* of 1826, the Horry District was surveyed by Harlee in 1820. No settlements are shown in the project area (Figure 7). The majority of the project corridor is located among swampland, but the absence of houses surrounding the swamps may not so much indicate sparse settlement as it may reflect the subscription basis of Mills' *Atlas*. The subsistence

farmers of Horry District may either have been unable to subscribe or may have had no need to let others know their location. The 1860 census for Horry District indicates that many of the farmers in Kingston, for example, could neither read nor write, further reducing the benefits of listing in an atlas.

The emphasis on subsistence farming appears to be the result of topography. Only 20% of the land is subject to the type of tidal overflow necessary for wet cultivation of rice. Mills (1972[1826]:581) notes that the river floodplain soil was productive where it could be reclaimed by drainage, while the upland soils were much less productive. This difference in quality is reflected in the prices for the land. Mills states that,

the low land swamps, when secured from the freshets, will sell for 40 or \$50 an acre. The uplands are valued at from \$4 down to 25 cents per acre (Mills 1972[1826]:581).

Interestingly, the price of "improved farms" ranged from \$20 to \$50 an acre as late as 1918 (Tillman et al. 1919:340). The few plantations found in Horry District were primarily located in All Saints Parish, east and south of the Waccamaw River. It was from this area that a small quantity of rice was exported throughout the nineteenth century (Rogers 1972:13).

Because the soils of Horry District were not able to support plantation agriculture a unique distribution of population and a very low percentage of slaves were found in the region. Horry County also continued to play a minor role in state politics. The area, prior to the Civil War, was oriented to smaller farmers and never developed an aristocratic plantation society with political and economic powers. Most of the farms,

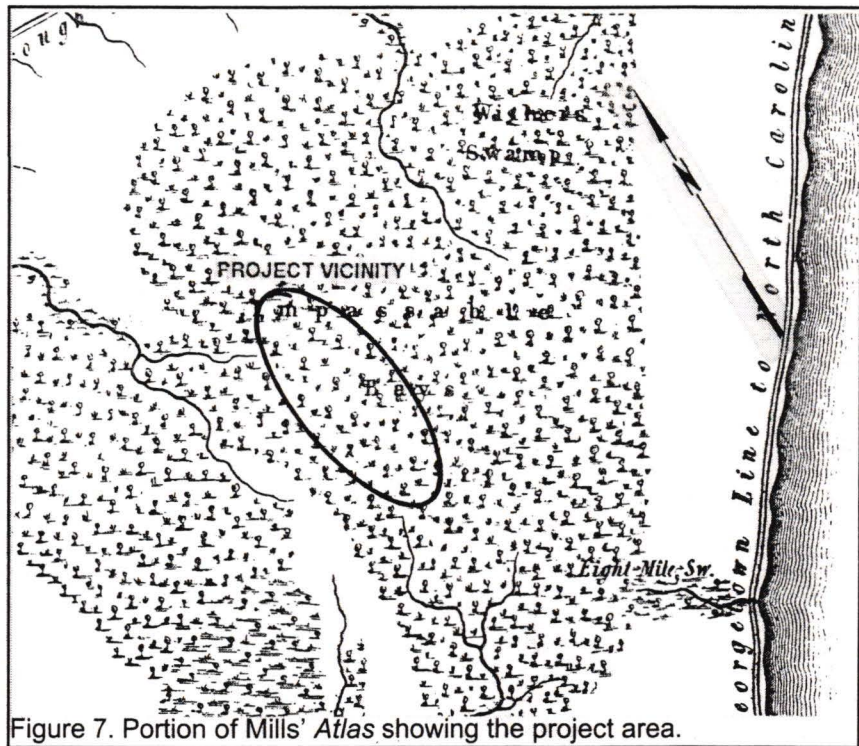


Figure 7. Portion of Mills' Atlas showing the project area.

including the larger ones, were situated in Kingston Township. The 1860 census indicates that of the 782 farms, 560 were in Kingston (Rogers 1972:12). In 1860, the population was 2,606 and there were only 708 slaves. This ratio of 70% white and 30% blacks has not only remained stable into the twentieth century, but also stands in contrast to Georgetown District where about 12% of the population was white and 88% was black until the 1880 census, when the white population increased to about 20% (Rogers 1972).

Horry District never sided with the radical secessionists, possibly because of the influence of northern immigrants or because of the resentment of the political and economic power of slave owners. In any event, Horry County responded "enthusiastically" to the call for volunteers at the outbreak of the Civil War (Rogers 1972:35).

By the 1830s a new industry was competing with farming in the Horry area. Northern immigrants from Maine, coupled with "pine woods speculators" from North Carolina began to exploit the forest products of both the

uplands and swamp areas (Tillman et al. 1919:330; Berry 1970; Rogers 1972:14). The Horry District was the leading turpentine producer in South Carolina by 1860, producing products valued at \$392,643. The lumber and turpentine industry continued to grow rapidly after the Civil War. Tobacco was introduced about 1850, but was not an important crop until after the Civil War, lead by the Green Sea Township.

Horry District saw little involvement in the Civil War, although 925 of the 1,000 men in the voting population volunteered for duty and served (Rogers 1972:35). Fort Randell was established at Clardy's Point on the Little River and saw skirmishes in 1863 and 1865. The salt works of Peter Vaught, Sr. at Singleton Swash were raided in April 1864, and in 1865 a Union expedition was led up the Waccamaw to destroy ferries at Bull Creek and Yahannah (Rogers 1972:35-38).

After the Civil War, Horry was part of the Military District of Eastern South Carolina, but the Federal stay was short and by 1866 military troops had left Horry County. This absence of Federal troops continued throughout Reconstruction and the Democrats maintained political control throughout the period. Further, there was no land distribution in Horry County, possibly because there was really no land work distributing (Rogers 1972:47). Following the Civil War a number of changes began to affect the Horry area. Tobacco began to be a more important crop, the first county bank was organized in 1880, the railroad and telegraph arrived in 1887, and in 1869 a regular weekly county newspaper appeared (the

Horry Weekly News, which published until 1877). Conwayboro was changed to Conway in 1883 and the only other "major" town continued to be Little River.

The turpentine business boomed in the 1870s and by 1880 there were 21 operators in the county, producing \$181,400 annually (Rogers 1972:50). Farming, however, continued to be important. In 1870 there were 1,300 farms averaging 50 acres in size. The major crops were still subsistence items such as corn, sweet potatoes, and rice. Few wage employees were found in Horry (Rogers 1972:58). The Socastee and Little River townships had the richest farms and the five largest farms also produced turpentine in 1870 (Rogers 1972:60). The Grange movement arrived in Horry County relatively late, never organized in many areas, and failed by the late 1870s.

By 1910 the County population had increased to almost 27,000 but there was no town, including Conway, with a population of at least 2,500. Conway continued, however, to have strong lumbering and mercantile interests. With the gradual decline of lumbering and the turpentine industry, farming was once again the

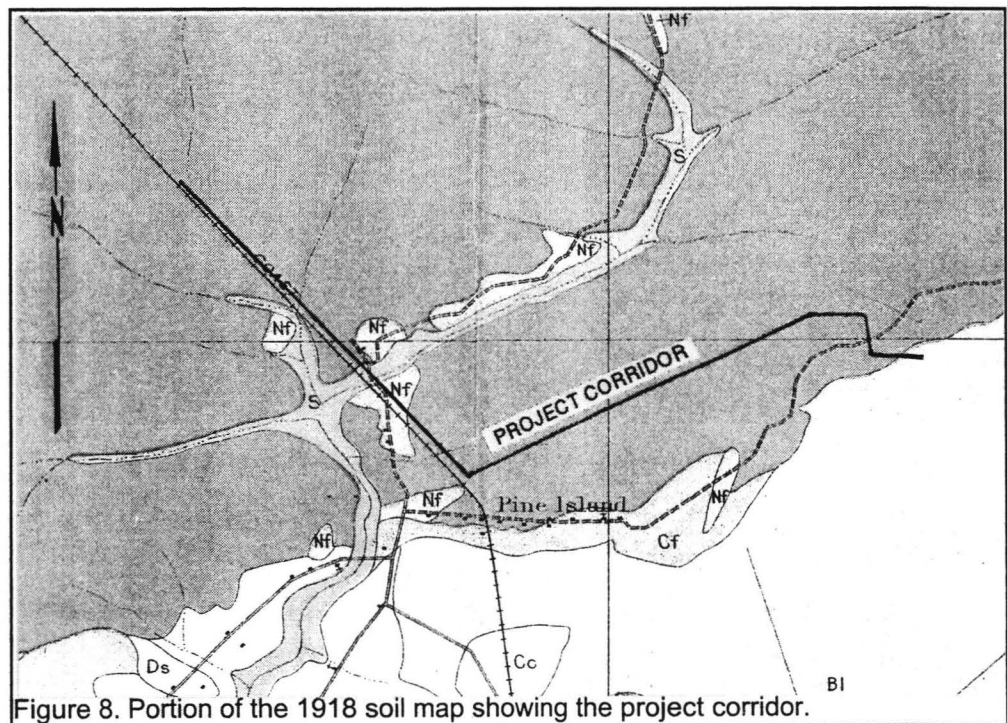


Figure 8. Portion of the 1918 soil map showing the project corridor.

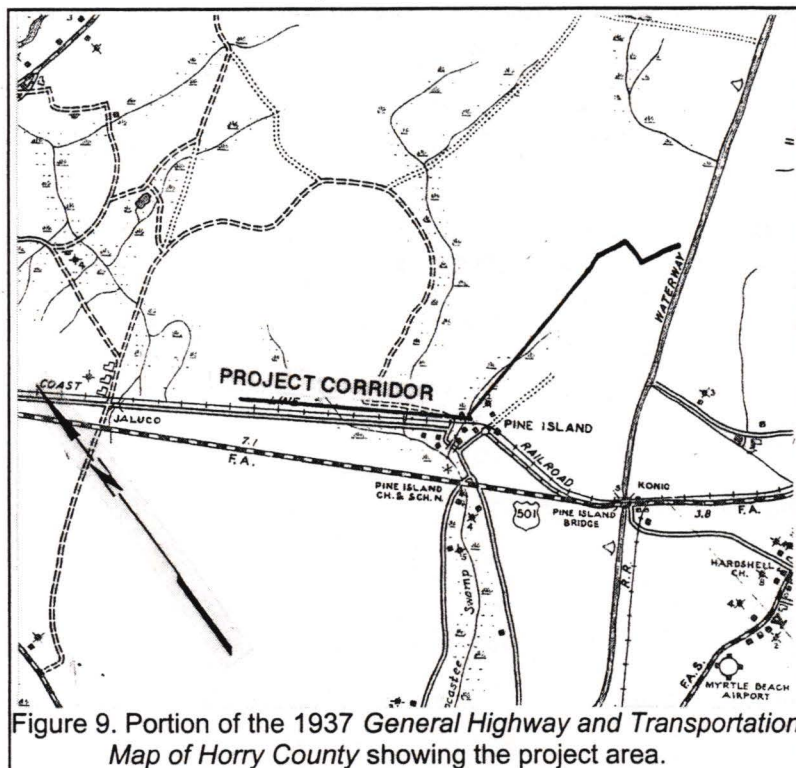
dominant activity in the county. The period from 1880 to 1910 saw corn acreage increase 140%, cotton acreage increase 90%, and tobacco acreage increase from 19 to 5,347 acres. During the same time rice production fell from 747,689 to 1,210 pounds (Tillman et al. 1919:333). By 1919 the chief money crops were corn, cotton, and tobacco, although corn was largely used to supply the home and fatten stock. After 1895 tobacco began to replace cotton as a prime money crop and by 1910 was "grown more or less generally over a county by small farmers who live on their farms and superintend the work (Tillman et al. 1919:335).

The 1918 soil survey map reveals a sparse scatter of houses in the general area, although only one appears to be on or next to the survey corridor (Figure 8). No evidence of this structure was found in the field.

In the early twentieth century hogs were the principle source of livestock income. These animals were usually slaughtered in the fall for home use or sale on the local market. Cattle were mostly scrub stock and dairying was neglected. Farm equipment was largely inadequate in the early 1900s and most of the plowing was done with one ox or mule. On many small farms the adequacy of farm equipment did not appreciably improve into the 1940s, when the probate inventory for one small Horry farmer listed only one mule, a one-horse wagon, one disc, four plows, one lot hoes, one guano distributor, a tobacco sprayer, and a corn planter (Trinkley and Caballero 1983:8). Tillman et al. (1919:338) indicate that in the early 1900s plowing was seldom more than 2 to 3 inches deep because of the poor machinery. It is suggested that this lack of equipment was not entirely related to a lack of prosperity, but rather was largely the result of cheap labor. Tillman et al. report that, "negro men receive 75 cents to \$1.25 a day . . . , while negro women are paid 50 to 65 cents a day" (Tillman et al. 1919:340).

Horry County, in 1910, had a relatively low rate of farm tenancy. The 1937 *General Highway and Transportation Map of Horry County* (Figure 9) shows several farm units in nearby Pine Island, east of the study corridor, but only one structure is shown on the corridor itself. No evidence of this structure was found in the field.

Tillman et al. (1919:340) indicate that 72.9% of the farms were operated by owners and 27% by tenants. The average size of such farms (each tenancy is classified as a farm) was 117.8 acres. This is contrasted with piedmont Spartanburg, where in 1920 32.1% of the farms



were operated by their owners and 67.7% were operated by tenants. In Spartanburg, where cotton was still king, the average farm size was 49.4 acres (Latimer et al. 1924:419). This dichotomy documents the differences between tenancy in the Atlantic Coastal Plain, where there was a low "devotion" to cotton, and in the Black Belt and Upper Piedmont, where cotton was more important, tenancy rates higher, and farm size smaller (see Wooffer et al. 1936).

RESEARCH METHODS

Archaeological Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100 foot intervals along the center line of the corridor which had a right-of-way of 50 feet.

All soil would be screened through ¼-inch mesh, with each test numbered sequentially. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1 foot or until sterile subsoil was encountered. All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered. A total number of 297 shovel tests were excavated along the corridor.

Should sites (defined by the presence of two or more artifacts from either surface survey or shovel tests within a 50 feet area) be identified, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at 25 to 50 feet intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. The information required for completion of South Carolina

Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

These proposed techniques were implemented with no significant modifications. Shovel tests were numbered starting at the existing South Prong Substation and ran approximately southeast to River Oaks Boulevard. The survey area was covered mostly in mixed pines and hardwoods, although planted pines and swamp were also encountered. The topography in this area was level with no distinct ridge tops. The area next to Socastee Swamp, however, tended to be low and wet.

Sites would be evaluated for further work based on the eligibility criteria for the National



Figure 10. View of railroad tracks next to the transmission line.

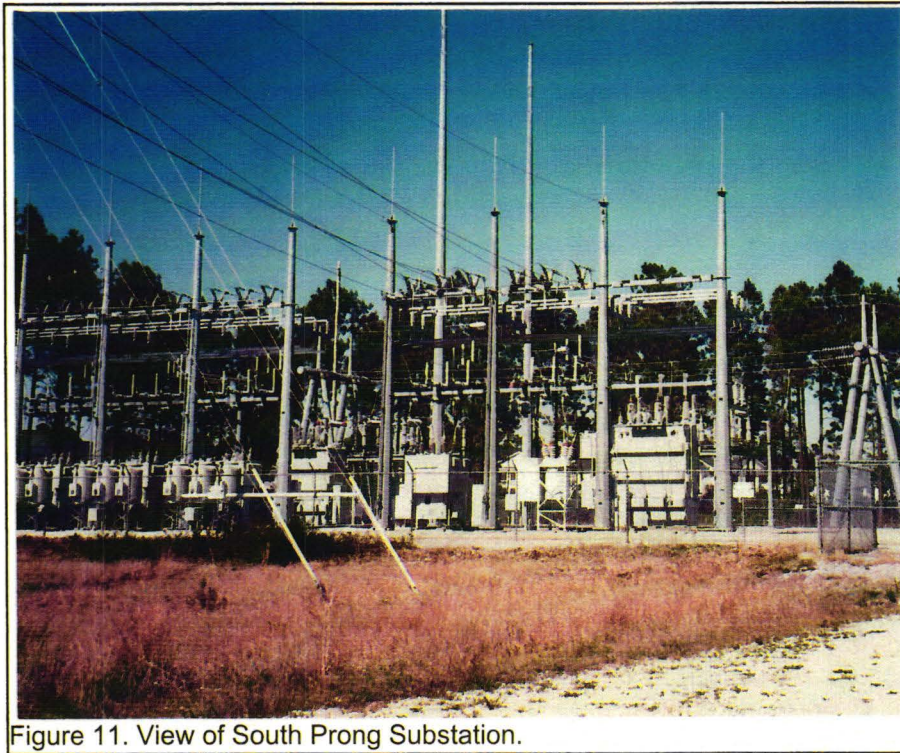


Figure 11. View of South Prong Substation.

Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead agency in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

Analysis of collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains. In general prehistoric materials were defined by such authors as Yohe (1996), Blanton et al. (1986), and Oliver et al. (1986).

Architectural Survey

As previously discussed, we elected to use a 0.5 mile area of potential effect (APE). The architectural survey would record buildings, sites, structures, and objects which appeared to have been constructed before 1950 and which have "retain[ed] some measure of its historic integrity" (Vivian n.d.). Those which have undergone such extensive modifications to preclude their eligibility were not recorded.

For each identified resource an architectural survey form would be completed and at least two representative photographs would be taken. Permanent control numbers would be assigned by the S.C. Department of Archives and History at the conclusion of the study. The site forms for the resources identified during this study would then be submitted to the South Carolina State Historic Preservation Office.

Site Evaluation

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of

Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead federal agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

a. that are associated with events that have made a significant contribution to the broad patterns of our history; or

b. that are associated with the lives of persons significant in our past; or

c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
- identification of the historic context applicable to the site, providing a framework for the evaluative process;
- identification of the important research questions the site might be able to address, given the data sets and the context;
- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and
- identification of important research questions among all of

those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered. As a result, some aspects of the evaluative process have been summarized, but we have tried to focus on each archaeological site's ability to address significant research topics within the context of its available data sets.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site forms for the identified archaeological site, 38HR473, has been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes have been prepared for curation using archival standards and will be transferred to the South Carolina Institute of Archaeology and Anthropology as soon as the project is complete.

RESULTS OF SURVEY

Introduction

The archaeological survey of the proposed transmission corridor revealed one site, 38HR473. The site is a very sparse Middle Woodland lithic and pottery scatter that is recommended not eligible for the National Register.

The architectural survey identified no sites which would be eligible for inclusion on the National Register of Historic Places. The area is being developed very fast and few historic structures are found even outside the 0.5 mile APE.

Archaeological Resources

38HR473

Site 38HR473 consists of a sparse surface scatter of Middle Woodland lithics and pottery. It is located on a ridge at an elevation of about 25 feet AMSL. A central UTM coordinate for the site is E690600 N3785874 (NAD27 datum).

Vegetation in the area consists of mixed pines and hardwoods, although Socastee Swamp is located directly southeast of the site.

While shovel tests were conducted at the proposed 100-foot intervals, this site was found during a surface investigation. Close interval testing at 50-foot

intervals revealed no positive tests. The site area had been graded and filled due to construction activities of an unrelated neighborhood project. The artifacts were found at the edge of the fill with the original soil.

Shovel tests in the area resemble Lynn Haven sands which have an A horizon of black (10YR2/1) sand to a depth of 0.8 foot over a gray (10YR5/1) sand to a depth of 1.1 feet. However, with the damage due to logging and grading and the addition of at least a foot of fill, the shovel tests produced more of a gray to brown sand, suggestive of some mixing and the loss of the A horizon.

The surface artifacts found were one grinding stone, one Deptford eroded sherd, and two small unidentifiable prehistoric sherds. Only

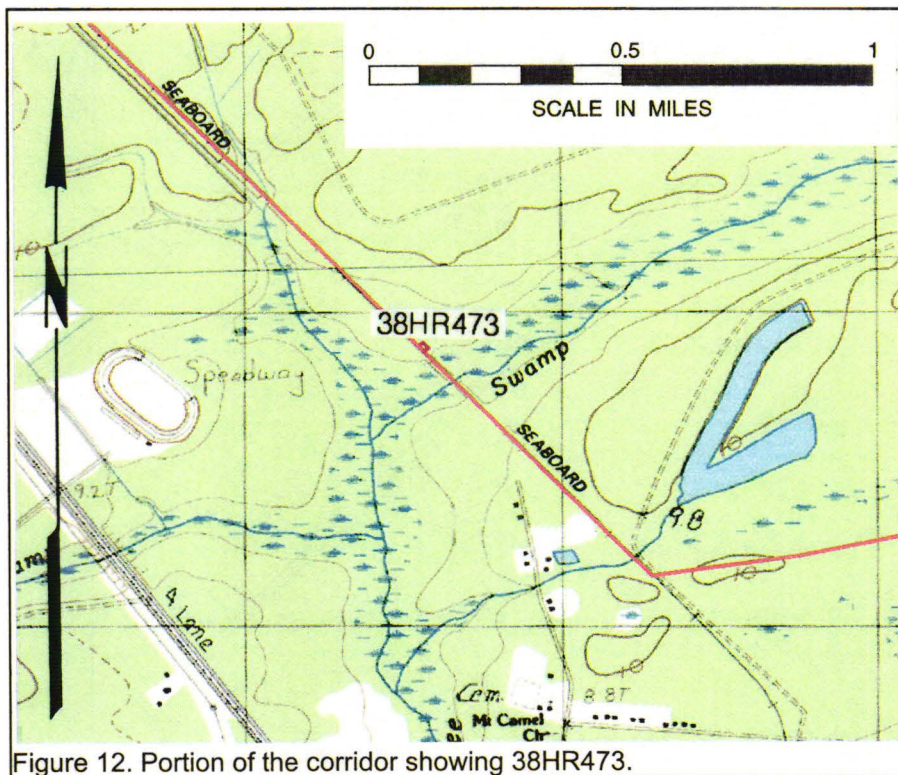
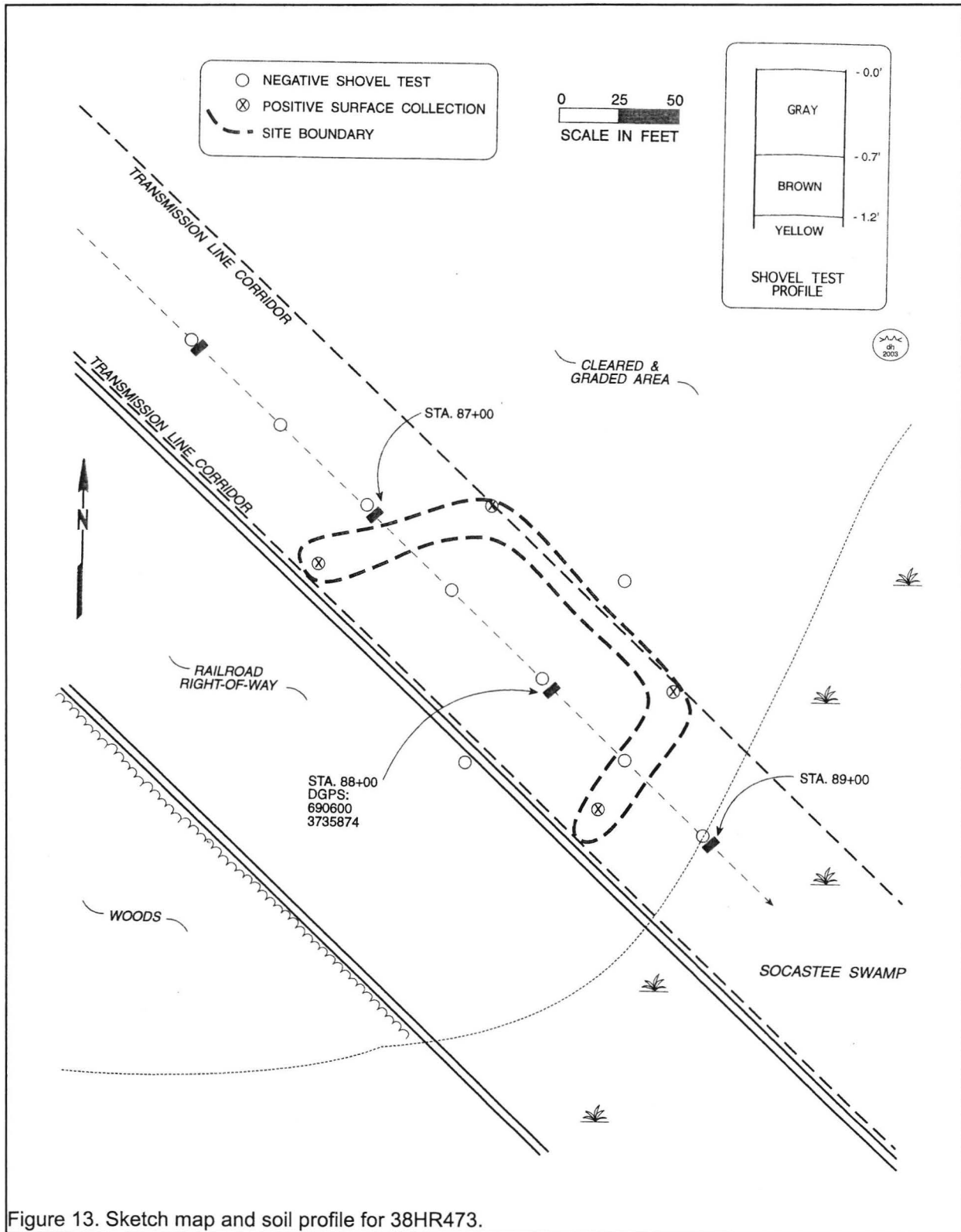


Figure 12. Portion of the corridor showing 38HR473.



the Deptford sherd is diagnostic, dating to the Middle Woodland. The site area is approximately 75 feet by 175 feet.

While one sherd was diagnostic, we did not find the data sets to be able to address significant research questions. In addition, the logging and construction activities have severely damaged the integrity of the site. It is unlikely that this site will be able to produce any significant remains to answer any research questions. This site is recommended not eligible for inclusion on the National Register of Historic Places. No additional management activities are recommended pending review by the State Historic Preservation Office.



Figure 14. View of 38HR473 next to construction activity.

Other Resources

While historic maps (see Figures 8 and 9) suggest at least two twentieth century structures in the immediate area, no historic remains were encountered in the shovel testing. Given the very narrow corridor it is possible that these sites were simply not within the survey area. It is also possible that they have already been destroyed by development activities. Regardless, they were not encountered during this study.

Architectural Resources

No architectural resources were identified either on the GPS or in the field. Commercial and residential development in the area is rapidly increasing, thus destroying most of the older structures in the area.

CONCLUSIONS

This study involved the examination of a 5.6 mile corridor situated in eastern Horry County, South Carolina. The tract is proposed for the construction of the River Oak 115kV Transmission Line to be used by Santee Cooper. This report, conducted for Sabine & Waters, provides the results of that investigation and is intended to assist that organization comply with their historic preservation responsibilities.

The survey area consists of areas of planted pines, mixed pines and hardwood forests, and swamp. The archaeological survey, which included close interval shovel testing, conducted at 100-foot intervals, revealed one site, 38HR473. This site represents a Middle Woodland lithic and pottery scatter. The site is recommended not eligible for the National Register.

The surrounding areas are being quickly developed with few rural areas still existing.

Nevertheless, an APE 0.5 mile around the corridor was examined, but no historic structures were identified which are intact and which appear to be potentially eligible for inclusion on the National Register of Historic Places.

It is possible that archaeological remains may be encountered in the area during construction. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

SOURCES CITED

- Anderson, David G.
1979 *Excavations at Four Fall Line Sites: The Southeastern Beltway Project*. Commonwealth Associates, Inc., Jacksonville, Michigan. Submitted to the South Carolina Department of Highways and Public Transportation, Columbia.
- Anderson, David G., Charles E. Cantley, and A. Lee Novick
1982 *The Mattassee Lake Sites: Archaeological Investigations Along the Lower Santee River in the Coastal Plain of South Carolina*. Commonwealth Associates, Jackson, Michigan.
- Anderson, David G., Kenneth E. Sassaman, and Christopher Judge
1992 *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*. Council of South Carolina Professional Archaeologists, Columbia.
- Anonymous
n.d. *South Carolina Statewide Survey of Historic Places Survey Manual*. S.C. Department of Archives and History, Columbia.
- 1884 *South Carolina in 1884: A View of the Industrial Life of the State*. The News and Courier, Charleston, South Carolina.
- 1976 *The Waccamaw Region Historic Preservation Plan*. Waccamaw Regional Planning and Development Council, Georgetown, South Carolina.
- Baldwin, John L.
1973 *Climates of the United States*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Washington, D.C.
- Barry, John M.
1980 *Natural Vegetation of South Carolina*. University of South Carolina, Columbia.
- Bense, Judith A.
1994 *Archaeology of the Southeastern United States: Paleoindian to World War I*. Academic Press, New York.
- Berry, C.B.
1970 The Colonial Period. *Independent Republic Quarterly* 9(1):13-15.
- Blanton, Dennis B., Christopher T. Espenshade, and Paul E. Brockington, Jr.
1986 *An Archaeological Study of 38SU83: A Yadkin Phase Site in the Upper Coastal Plain of South Carolina*. Garrow and Associates, Inc., Atlanta.
- Bridgman, Kara and Roman Crumpton
2001 *Cultural Resources Survey of the Forest Lakes Plantation Tract, Horry County, South Carolina*. Brockington and Associates, Inc., Charleston.
- Brown, Paul J.
1975 *Coastal Morphology of South Carolina*. Unpublished M.S. Thesis, Department of Geology, University of South Carolina, Columbia.
- Cable, John
1991 *Archaeological Test Excavations*

- on the Northeastern Perimeter of the Buck Hall Site (38CH644), Francis Marion National Forest, South Carolina. New South Associates, Irmo, South Carolina.
- Caldwell, Joseph R.
1958 *Trend and Tradition in the Prehistory of the Eastern United States*. Memoirs of the American Anthropological Association 88.
- Coe, Joffre L.
1952 The Cultural Sequence of the Carolina Piedmont. In *Archaeology of the Eastern United States*, edited by J.B. Griffin, pp. 301-311. University of Chicago Press, Chicago.
- 1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society* 54(5).
- Cooke, C. Wythe
1936 *Geology of the Coastal Plain of South Carolina*. Bulletin 867. U.S. Geological Survey, Washington, D.C.
- Derting, Keith M., Sharon L. Pekrul, and Charles J. Rinehart
1991 *A Comprehensive Bibliography of South Carolina Archaeology*. Research Manuscript 211. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.
- Dudley, Travis A.
1986 *Soil Survey of Horry County, South Carolina*. U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.
- Ellerbe, Clarence M.
1974 *South Carolina Soils and Their Interpretations for Selected Uses*. S.C. Land Resources Commission, Columbia.
- Ferguson, Leland G.
1971 *South Appalachian Mississippian*. Ph.D. dissertation, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor, Michigan.
- Fetters, Thomas
1990 *Logging Railroads of South Carolina*. Heimburger House Publishing, Forest Park, Illinois.
- Fogg-Amed, Erika
n.d. a Sites dug Summer of 1964 (and Fall, 1963), Summer of 1965. Field notes on file, S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.
- n.d. b Notes on Archaeological Work Done on the Northeast Coast of South Carolina, 1963-1965. Field notes on file, S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.
- Goodyear, Albert C., John H. House, and Neal W. Ackerly
1979 *Laurens-Anderson: An Archaeological Study of the Inter-Riverine Piedmont*. Anthropological Studies 4, Occasional Papers of the Institute of Archaeology and Anthropology, University of South Carolina, Columbia.
- Haag, William G.
1975 The Paleoecology of the South Atlantic Coast. *Geoscience and Man* 12:77-81.
- Hanson, Glen T., Jr.
1982 The Analysis of Late Archaic-Early Woodland Adaptive Change Along the Middle Savannah River: A Proposed Study. *South Carolina Institute of Archaeology and Anthropology Notebook* 14:1-38.

SOURCES CITED

- Küchler, A.W.
1964 *Potential Natural Vegetation of the Conterminous United States*. Special Publication No. 36. American Geographical Society, New York.
- Latimer, W.J. and Cornelius Van Duyn
1910 Soil Survey of the Conway Area, South Carolina. *Field Operations of the Bureau of Soils* 1909:473-502.
- Lefler, Hugh T., editor
1967 *Lawson's A New Voyage to Carolina*. University of North Carolina Press, Chapel Hill.
- Lewis, Catherine H.
1998 *Horry County, South Carolina: 1730-1993*. University of South Carolina Press, Columbia.
- Martin, Debra K., Lesley M. Drucker, and Susan H. Jackson
1987 *An Archaeological Inventory Survey of S.C. Highway 544 Improvements, Horry County South Carolina*. Resource Studies Series 102. Carolina Archaeological Services, Columbia.
- Mathew, William M., editor
1992 *Agriculture, Geology, and Society in Antebellum South Carolina: The Private Diary of Edmund Ruffin, 1843*. University of Georgia Press, Athens.
- Mathews, Thomas D., Frank W. Stapor, Jr., Charles R. Richter, John V. Miglarese, Michael D. McKenzie, and Lee R. Barclay
1980 *Ecological Characterization of the Sea Island Coastal Region of South Carolina and Georgia*, vol. 1. Office of Biological Services, Fish and Wildlife Service, Washington, D.C.
- Michie, James L.
1977 *The Late Pleistocene Human Occupation of South Carolina*. Unpublished Honor's Thesis, Department of Anthropology, University of South Carolina, Columbia.
- Mills, Robert
1972 [1826] *Statistics of South Carolina*. Hurlbut and Lloyd, Charleston, South Carolina. 1972 facsimile ed. The Reprint Company, Spartanburg, South Carolina.
- Oliver, Billy L.
1981 *The Piedmont Tradition: Refinement of the Savannah River Stemmed Point Type*. Unpublished Master's thesis, Department of Anthropology, University of North Carolina, Chapel Hill.
- Oliver, Billy L., Stephen R. Clagett, and Andrea Lee Novick
1986 Lithic Analysis. In *Indian and Freedmen Occupation at the Fish Hall Site (38BU805), Beaufort County, South Carolina*, edited by Michael Trinkley, pp. 183-207. Research Series 1. Chicora Foundation, Inc., Columbia.
- Pecorelli, Harry
1999 *Cultural Resources Inventory of a Proposed Mine Site on the Carolina Forest Tract, Horry County, South Carolina*. Brockington and Associates, Inc., Charleston.
- Penney, James T.
1945 Natural Resources. In *South Carolina: Economic and Social Conditions in 1944*, edited by W.H. Callcott, pp. 1-27. University of South Carolina, Columbia.
- Phelps, David A.
1983 *Archaeology of the North Carolina Coast and Coastal Plain: Problems and Hypotheses*.

- In *The Prehistory of North Carolina: An Archaeological Symposium*, edited by Mark A. Mathis and Jeffrey J. Crow, pp. 1-52. North Carolina Division of Archives and History, Department of Cultural Resources, Raleigh.
- Plummer, Gayther L.
1975 18th Century Forests in Georgia. *Georgia Academy of Science Bulletin* 33(1):1-19.
- Reid, D.
1999 *Cultural Resource Survey of the Clemson Tract, Horry County, South Carolina*. Brockington and Associates, Atlanta.
- Richards, Horace G.
1950 *Geology of the Coastal Plain of North Carolina*. Transactions of the American Philosophical Society 40(1).
- Rogers, James S., III
1972 *The History of Horry County, South Carolina, 1850-1876*. Unpublished M.A. Thesis, Department of History, University of South Carolina, Columbia.
- Ryan, Thomas M.
1972 *Archaeological Survey of the Columbia Zoological Park, Richland and Lexington Counties, South Carolina*. Research Manuscript Series 37. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.
- Sanders, Joseph C.
2001 *Cultural Resources Survey of a Proposed Natural Gas Pipeline along US Route 501, Horry County, South Carolina*. Brockington and Associates, Inc., Charleston.
- Sandifer, Paul A., John V. Miglarese, Dale R. Calder, John J. Manzi, and Lee A. Barclay
1980 *Ecological Characterization of the Sea Island Coastal Region of South Carolina and Georgia*, vol. 3. Office of Biological Services, Fish and Wildlife Service, Washington, D.C.
- Sassaman, Kenneth E.
1993 *Early Woodland Settlement in the Aiken Plateau: Archaeological Investigations at 38AK157, Savannah River Site, Aiken County, South Carolina*. Savannah River Archaeological Research Papers 3. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.
- Sassaman, Kenneth E., Mark J. Brooks, Glen T. Hanson, and David G. Anderson
1990 *Native American Prehistory of the Middle Savannah River Valley*. Savannah River Archaeological Research Papers 1. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.
- Service, E.M.
1966 *The Hunters*. Prentice-Hall, Englewood Cliffs.
- Sharer, G. Terry
1971 Indigo in Carolina, 1671-1796. *South Carolina Historical Magazine* 72:94-103.
- Smith, Lynwood
1933 *Physiography of South Carolina*. Unpublished M.S. Thesis, Department of Geology, University of South Carolina, Columbia.
- South, Stanley A.
1959 *A Study of the Prehistory of the Roanoke Rapids Basin*. Master's thesis, Department of Sociology and Anthropology, University of

SOURCES CITED

- thesis, Department of Sociology and Anthropology, University of North Carolina, Chapel Hill.
- 1976 An Archaeological Survey of Southeastern North Carolina. *South Carolina Institute of Archaeology and Anthropology Notebook* 93.
- Starr, Rebecca
1984 *A Place Called Daufuskie: Island Bridge to Georgia, 1520-1830*. Unpublished M.A. thesis, Department of History, University of South Carolina, Columbia.
- Stoltman, James B.
1974 *Groton Plantation: An Archaeological Study of a South Carolina Locality*. Monographs of the Peabody Museum 1, Harvard University, Cambridge.
- Taylor, Richard L., editor
1984 *Cultural Resources Survey of the Proposed Pee Dee Electric Generating Facility in Florence County, South Carolina*. Commonwealth Associates, Jackson, Michigan.
- Tillman, B.W., W.E. McLendon, H.H. Krusehopf, A.C. Anderson, Cornelius Van Duyne, and W.J. Latimer
1919 Soil Survey of Horry County, South Carolina. *Field Operations of the Bureau of Soils* 1918:329-376.
- Townsend, Jan, John H. Sprinkle, Jr., and John Knoerl
1993 *Guidelines for Evaluating and Registering Historical Archaeological Sites and Districts*. Bulletin 36. National Park Service, National Register of Historic Places, Washington, D.C.
- Trinkley, Michael
1980a *Additional Investigations at* 38LX5. South Carolina Department of Highways and Public Transportation, Columbia.
- 1980b *Investigation of the Woodland Period Along the South Carolina Coast*. Ph.D. dissertation. Department of Anthropology, University of North Carolina, Chapel Hill.
- 1990 *An Archaeological Context for the South Carolina Woodland Period*. Chicora Foundation Research Series 22. Chicora Foundation, Inc., Columbia, S.C.
- Trinkley, Michael and Olga M. Caballero
1983 *Additional Archaeological, Historical, and Architectural Evaluation of 38HR127 and 38HR131, Horry County, South Carolina*. S.C. Department of Highways and Public Transportation, Columbia.
- Trinkley, Michael, Debi Hacker, and Natalie Adams
1993 *Life in the Pee Dee: Prehistoric and Historic Research on the Roche Carolina Tract, Florence County, South Carolina*. Research Series 39. Chicora Foundation Inc., Columbia.
- U.S. Army Corps of Engineers
1973 *Flood Plain Information - Waccamaw River, Kingston Lake Swamp, Crab Tree Swamp, City of Conway, South Carolina*. Charleston District, Corps of Engineers, Charleston, South Carolina.
- Utterback, J. David
1988 *Architectural and Historic Survey of Horry County, South Carolina*. J. David Utterback, Inc., Socastee, South Carolina.
- Vivian, Daniel J.
2001 *South Carolina Statewide Survey*

- of *Historic Properties*. S.C. Department of Archives and History, Columbia.
- Voorhies, M.R.
1974 Pleistocene Vertebrates with Boreal Affinities in the Georgia Piedmont. *Quaternary Research* 4:85-93.
- Wallace, David D.
1951 *South Carolina: A Short History, 1520 - 1948*. University of South Carolina Press, Columbia.
- Walthall, John A.
1980 *Prehistoric Indians of the Southeast: Archaeology of Alabama*. University of Alabama Press, University.
- Ward, Trawick
1978 *The Archaeology of Whites Creek, Marlboro County, South Carolina*. Research Laboratories of Anthropology, University of North Carolina, Chapel Hill.
- 1983 Whites Creek: The Second Time Around. *South Carolina Antiquities* 15:63-65.
- Watson, E.J.
1916 *Twelfth Annual Report of the Commissioner of Agriculture, Commerce and Industries of the State of South Carolina*. Gonzales and Bryan, Columbia.
- Watts, W.A.
1970 The Full Glacial Vegetation of Northwestern Georgia. *Ecology* 51:17-33.
- 1971 Postglacial and Interglacial Vegetation History of Southern Georgia and Central Florida. *Ecology* 52:666-690.
- 1975 Vegetation Record for the Last 20,000 Years from a Small Marsh on Lookout Mountain, Northwestern Georgia. *Geological Society of America Bulletin* 86:287-291.
- 1980 Late-Quaternary Vegetation History at White Pond on the Inner Coastal Plain of South Carolina. *Quaternary Research* 13:187-199.
- Whitehead, Donald R.
1965 Palynology and Pleistocene Phytogeography of Unglaciaded Eastern North America. In *The Quaternary of the United States*, edited by H.E. Wright, Jr. and David G. Frey, Princeton University Press, Princeton.
- 1967 Studies of Full-Glacial Vegetation and Climate in Southeastern United States. In *Quaternary Paleocology*, edited by E.J. Cushing and H.E. Wright, pp. 237-248. Yale University Press, New Haven.
- 1972 Developmental and Environmental History of the Dismal Swamp. *Ecological Monographs* 42:301-315.
- 1973 Late-Wisconsin Vegetational Changes in Unglaciaded Eastern North America. *Quaternary Research* 3:621-631.
- Waterhouse, Richard
1975 England, the Caribbean, and the Settlement of Carolina. *Journal of American Studies* 9:259-281.
- Williams, Stephen B., editor
1968 *The Waring Papers: The Collected Works of Antonio J. Waring, Jr.* Papers of the Peabody Museum of Archaeology and Ethnology 58.
- Woofter, T.J., Jr.
1936 *Landlord and Tenant of the Cotton Plantation*. Research

SOURCES CITED

Monograph 5. Division of Social
Research, Works Progress
Administration, Washington, D.C.

Yohe, Robert M., II

- 1996 Analysis of Flaked Stone
Artifacts. In *Archaeological
Laboratory Methods: An
Introduction*, edited by Mark Q.
Sutton and Brooke S. Arkush, pp.
39-68. Kendall/Hunt Publishing,
Dubuque, Iowa.

